Utah

Highway Safety Improvement Program
Fiscal Year 2009 Annual Report

Utah Department of Transportation
Division of Traffic and Safety

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V. HIGH RISK RURAL ROADS PROGRAM (HRRRP)

The HRRRP provides funding for construction and operational improvements on roadways that have higher crash rates than the state average and are functionally classified as rural collectors and rural local roads. The program dovetails with the HSIP to improve highway safety in support of the UCSP.

A. *METHODOLOGY*

The UCSP identifies ROR crashes as a high priority for mitigation. A review of Utah crash data reveals that ROR crashes comprise about half of fatalities – by far the dominant fatal crash type in the state. Approximately two-thirds of all ROR fatalities occur in rural areas, and 10% of all ROR fatalities occur on collector and local roads in rural areas. Any effort to mitigate ROR fatalities must include an emphasis on ROR crashes on rural collector and local roads. The HRRRP is an ideal source of funding for this purpose.

Utah's state roads carry three-quarters of the state's annual vehicle-miles traveled. This results in a significant portion of transportation funding being allocated to state roads. As such, there are typically adequate funds available to install and maintain needed warning signing and delineation. The same cannot be said of rural county and city roads. Rural counties have a difficult time maintaining their roadway structures and pavement. Signing is often overlooked. As a result, many rural local roads do not have adequate signing and delineation to inform drivers. This likely contributes to a high incidence of ROR crashes.

Local jurisdictions do not have their routes location-referenced (see the Utah FY 2009 5% Report for a discussion on this topic as well as efforts underway to improve future analysis capabilities). As a result, analysis of local roads below the aggregate level is extremely difficult. Thus, aggregate analysis of ROR data by county was used to establish the priority counties.

In summary, the methodology is based on ROR crash data at the aggregate level. Engineering judgment is then used to determine which roads within the county are likely to contribute the most to the noted aggregate ROR crash levels. These roads are audited to determine what warning signing, regulatory signing, and delineation improvements should be implemented.

B. *PROGRAM IMPLEMENTATION*

Utah receives about $700,000 annually for the HRRRP. Federal FY 2006 was the first year this funding was available. HRRRP projects provide funding for installation or replacement of warning signs, regulatory signs, delineations, guardrails, and barriers that are non-existent or sub-standard.

In 2006, the first two HRRRP projects provided improvements on rural roadways in Carbon and Summit Counties. Improvements in Juab, Iron, Uintah, and Duchesne Counties were constructed in 2007. The 2008 HRRRP projects included improvements in Grand and Box Elder Counties. Another set of projects is under construction this year in San Juan and Sevier Counties.

In 2010, UDOT plans to approach Sanpete, Wasatch, and Millard Counties about partnering to implement HRRRP projects in those locations. After 2010, the first round of signage and delineation projects will be complete. Beginning in 2011, UDOT plans to focus its HRRRP efforts on barrier and guardrail improvements.

C. *ASSESSMENT*

Table 2 shows statistics for severe crashes (those involving fatalities and serious injuries) on non-state roadways within the rural counties that are eligible for HRRRP funding. The numbers represent a five-year period from 2003 to 2007. The information shown in this table was used to determine which counties should receive HRRRP funding. UDOT plans to fund HRRRP improvements in the counties that have above-average crash totals.

Table 1 – Severe Crashes on Non-State Roads, 2003-2007

County	Severe Crashes (Fatal and Serious Injury Crashes)
Uintah	101
Iron	80
Grand	68
Duchesne	65
Box Elder	61
Sanpete	45
Summit	44
Wasatch	44
Millard	40
San Juan	38
Sevier	37
Carbon	32
Wayne	25
Garfield	21
Juab	19
Emery	16
Kane	15
Beaver	14
Morgan	10
Piute	4
Daggett	1
Rich	1

As mentioned earlier, construction of the first set of HRRRP projects in Carbon and Summit Counties was completed in 2006. It is too early to make definite conclusions about the effectiveness of these projects because three years of post-construction crash statistics are not yet available. However, for illustrative purposes, we have included before-after photos that show examples of completed projects in Carbon and Summit Counties. These photos are shown in Figures 5 through 8.

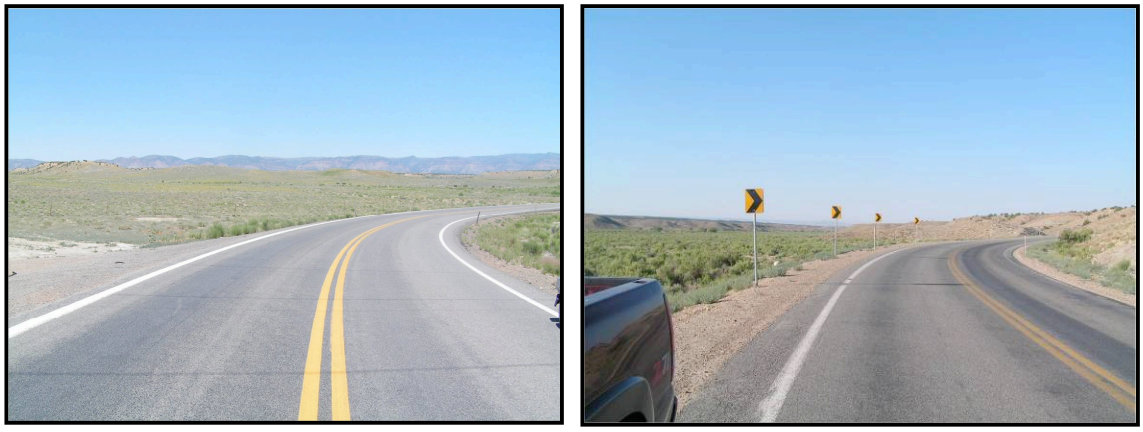

Figure 1 – Site #1 Before-After Photos

Figure 6 – Site #2 Before-After Photos

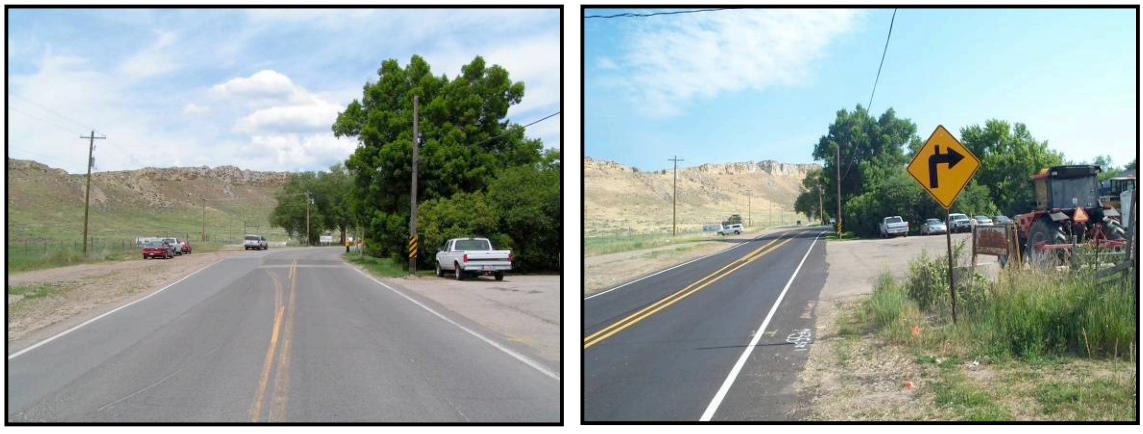

Figure 7 – Site #3 Before-After Photos

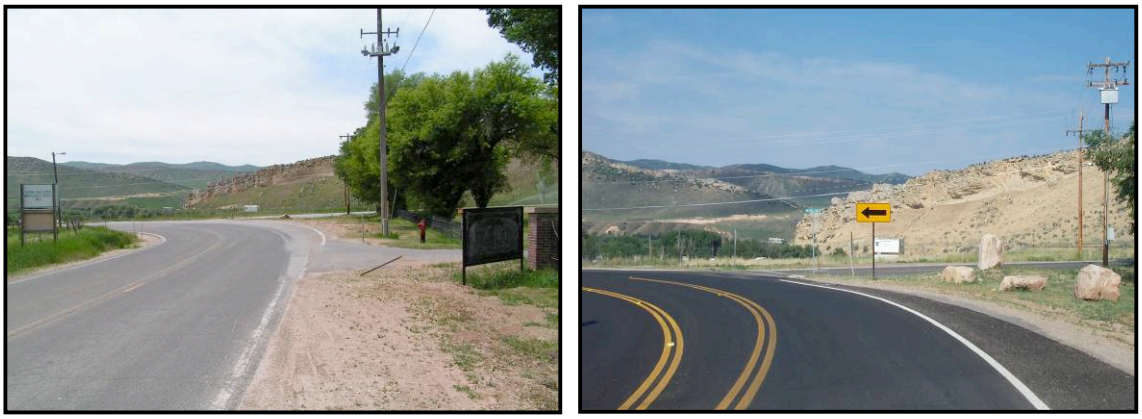

Figure 8 – Site #4 Before-After Photos

Expectations are high that these low-cost and easily implemented warning sign improvements will be very effective. Assessments of HRRRP improvements within each county will be included in future HSIP reports as post-implementation crash data become available.

In addition to analyzing post-construction crash statistics, UDOT plans to conduct qualitative reviews of each project with the respective county agencies. The goals of these reviews are to assess the perception of the counties with respect to the HRRRP process, assess their view of the safety benefits of completed projects, and gain feedback to improve the process going forward. Information from these reviews will be included in future HSIP annual reports beginning with the FY 2010 report.

D. *OVERALL EFFECTIVENESS OF THE HRRRP*

The HRRRP is even newer in Utah than the HSIP. As such, it is premature at this time to definitively state the effectiveness of the program. However, the FY 2010 report will have complete three-year post-construction crash data for the first two counties (Carbon and Summit) where HRRRP improvements were implemented.

VI. CONTACT INFORMATION

Questions regarding this report should be directed to:

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